

Jodrey School of Computer Science SEMINAR PRESENTATION

November 4, 2016 - November 4, 2016

Friday, November 4, 2016

2:30 PM

Carnegie Hall 113

Recent surveys with a topo-bathymetric lidar, revealing information above and below the waterline”

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Centre of Geographic Sciences (COGS) – NSCC

Abstract

The coastal zone consists of the area around the land-sea boundary and is critical to many community's economic development and prosperity. With issues related to ecological degradation, storm surge flooding and erosion, the ability to map and monitor the condition of the coastal zone in 3-D is critical. The Applied Geomatics Research Group (AGRG) within the Nova Scotia Community College (NSCC) acquired a new shallow water airborne topo-bathymetric lidar sensor, the Leica Geosystems Chiroptera II, and have flown missions in Sept 2014. Many of the areas are sheltered bays that host shellfish aquaculture farms or have the potential to host farms. Other survey areas are near major marine terminals used to transport petroleum products. The high resolution seamless topo-bathymetric elevation data are used to construct hydrodynamic models which provide information on current speeds, flushing rates and the fate of particles (oil, waster etc.) to support aquaculture site selection and oil spill preparedness. Another application of these data are to determine the amount of harvestable seaweed biomass that occurs within the intertidal zone. The volume of both laser and aerial photo data collected by this sensor requires the processing stream to be automated in order to generate 3-D products that can be consumed by GIS systems.

About The Presenter

Tim is a research scientist with the Applied Geomatics Research Group at Nova Scotia Community College in Canada. His research focus is mapping, monitoring and modeling processes in the coastal zone and uses topo-bathymetric lidar to support his research. He is the 2010 recipient of the Gulf of Maine Council Visionary Award, and obtained his PhD from Dalhousie University in 2006, MSc from Acadia in 1996, Advanced Diploma from the College of Geographic Sciences (now part of NSCC) in 1988, and a BSc from UNB in 1987.

Everyone is welcome to attend

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